

**DO YOU KNOW?**

*Concrete is an inexpensive, readily available, versatile, strong material available for more than 100 years. But, it is also a hard sponge; hydrophilic and soaks up water. A waterproofing system is needed to stop water from getting in, and from damaging rebar in the concrete. An integral waterproofing system is the most economical, effective and an environmentally-friendly alternative to membrane waterproofing.*

**PRODUCT DESCRIPTION:**

Multiguard IW+ is an advanced integral waterproofing product based on specially processed polymers and active ingredients with permanent waterproofing characteristics. Based on nanotechnology, **Multiguard IW+** creates millions of particles filling all pores and cavities available in the concrete and plaster, thus waterproofing structures permanently.

Ordinary concrete absorbs water and dissolved salts through its network of pores, leading to water infiltration and corrosion of steel reinforcement. **Multiguard IW+** reduces absorption to 1% or lower and forms a protective coating around steel reinforcement. Less water and fewer chlorides are able to penetrate the concrete and the reinforcement has enhanced protection from corrosion.

Using **Multiguard IW+** allows real estate owners and builders and developers to have the comfort of knowing their investment/project remains protected against one of nature's most damaging elements ...water.

**Multiguard IW+** works by improving dispersion of the agglomerates with the concrete mix, which ensures that the cement is used more efficiently.

**USES:**

**Multiguard IW+** reduces permeability throughout the depth of concrete, improves workability, with greater protection to rebar due to special corrosion inhibitors. This also makes concrete/mortar easier placing hence better compaction and finishing. Because of water retaining properties, **Multiguard IW+** helps in reduction in drying shrinkage cracks and hardened shrinkage cracks. It also has Internal concrete/plaster curing properties. Lower cement content for specified strength and workability. It increases strength and durability with higher cohesion. It reduces risk of segregation

and bleeding. It has lower water requirement for a given workability. The product is 100% chloride free.

Multiguard IW+ has application in following structures:

- Protection for walls and slabs
- Above and below grade construction
- Water containment Structures
- Sewage and waste water treatment plants
- Bridges, dams and highway infrastructure
- Secondary containment structures
- Underground vaults
- Tilt-up panel walls
- Pre-cast components
- Architectural water features and fountains
- Aquatic centers, marinas and zoos
- Swimming pools
- Where waterproofing and corrosion protection is required

#### **TYPICAL PROPERTIES:**

Multiguard IW+ may be used with all types of OPC and high alumina cements. It can also be used in conjunction with other MULTICHEM CONSTRUCTION CHEMICALS provided they are added separately to the concrete.

TECHNICAL DATA:		
<b>Appearance:</b>		Light clear liquid
<b>Permeability:</b>	IS : 2645-2003	Passes, reduces by 70%
<b>Packaging:</b>		200 ml, 1 lit, 5 lit, 20 lit, 100 lit, 200 lit
<b>Setting Time</b>	IS : 2645 : 2003	Passes
<b>Adhesion</b>	ASTM C1583, ASTM C1072, ASTM D3359	Neutral, no effect on adhesion of concrete or rebar
<b>Dosage:</b>		100-300 ml/ 50kg cement
<b>Drying Shrinkage</b>	ASTM C157	Help to reduce
<b>Slump</b>	ASTM C143	Near to neutral
<b>Specific Gravity</b>		1.05-1.08
<b>Chloride Content</b>	IS : 2645-2003	Nil
<b>Shelf Life</b>		2 years

**USAGE GUIDELINES:**

Use other superplasticizers as per the manufacturer’s recommended rate and requirement for the placement of green concrete in the project.

Cementitious Content: The cementitious content of concrete containing **Multiguard IW+** will not be less than 300 kg/m<sup>3</sup> with up to 15% fly ash or 30% slag replacement.

Water-Cement Ratio: 0.42 maximum. Water content of **Multiguard IW+** and other admixtures to be included in the water to cementitious ratio.

**NOTES:**

Contact Technical Services Department for concrete where air-entrainment additive is used.



It is important to perform trial mixes prior to placement and make necessary adjustments to the mix design as needed.

**STORAGE:**

Store in dry, frost-free conditions at moderate temperatures not greater than 25 °c.

**WARRANTY**

Multichem warrants **Multiguard IW+** to be free from manufacturing defects as defined in this warranty. Manufacturing defects are considered to be those defects that occur due to the quality of the ingredients or from the manufacturing process itself. This warranty does not include labor costs and other costs or expenses associated with the removal or installation of **Multiguard IW+**.

Because the Multichem does not perform the actual installation, it cannot be held responsible for the results of the application. Multichem specifically disclaims problems that occur due to weather conditions, structural movement, structural design flaws and application techniques.

This warranty is in lieu of all other warranties expressed or implied including the warranty of merchantability and fitness of purpose and of all other obligations or liabilities on Multichem part. Multichem neither assumes nor authorizes any person to assume for Multichem any liability in connection with the sale and installation of **Multiguard IW+**.

Because of constant improvement of manufacturing techniques and formulations, Company reserves rights to change this datasheet and its contents without prior notice.